STEP 6.4 INTRODUCTION TO INTERNAL AUDITING CONCEPTS

Overview

The Energy Management System (EnMS) audit is based on the generic concept of auditing. Simply put, an audit, any audit, is the comparison of actual conditions to expected conditions, and a determination as to whether one is in conformance or not in conformance. An audit is fundamentally a comparison of audit evidence to audit criteria to determine findings. An audit finding is the result of the comparison of the evidence to the criteria – it can be positive (the criteria and evidence match) or negative (the criteria and evidence do not match).

The evidence is the objective information collected through interviews, visual observation, review of records and review of documentation. The audit criteria are the expectations or "rules" of how conditions should be and are found in several places including ISO 50001, the organization's documentation, records, and assignment of responsibility. When evidence is compared to criteria, one can determine whether the audited entity does or does not conform. This determination is a finding, and a finding can either be one of conformance, or non-conformance. Therefore, an audit will always produce findings, even if what is being audited is in full conformance with criteria.

Other key definitions to be aware of with auditing are: objectives, scope, auditee, and auditor. The audit objective(s) is simply why you are conducting an audit; usually the reason is to demonstrate if the organization is meeting a set of criteria – such as an audit of energy planning requirements. The audit scope is what entity is being audited, and can be a company, a site, a process or even the operation of a piece of equipment.

In the case of ISO 50001 there are two basic perspectives that the audit evaluates. The first is the management system and the second is the energy performance of the system. In these audits there is a clear distinction between the auditee and client. The auditee is the entity being audited. The client is the party commissioning the audit. This distinction is important because the client sets the scope, objectives, and plan for an audit, not the auditee, although it is expected the auditee will be involved and cooperate.

The auditor is the one actually collecting evidence and determining findings. The auditor can be comprised of several individuals on a team. In an internal audit, the team members cannot audit work they are directly responsible for in the organization. It is also expected that team members have been provided some training on internal auditing. Due to the technical needs of energy performance auditing, this may be a different group of individuals than those that audit the management system. The performance of the system requires basic understanding of energy and energy performance. The management system requires a basic understanding of management systems and the requirements of the management system standard such as ISO 50001.

Essential Features of an Audit

The EnMS audit incorporates the following general features that are essential elements of any audit, meaning that audits:

- are pre-planned and methodical in nature rather than haphazard;
- should be free from bias or prejudice (do not audit your own work);
- encompass some form of critical consideration/review of the resultant findings;
- are concerned with all activities that are within the scope of the energy management system;
- evaluate energy performance;
- sample based on energy use and consumption and energy performance;
- should ensure that activities are carried out in an effective and consistent manner; and
- use persons who have been trained as auditors.

Why Perform EnMS audits?

In order to confirm that the defined EnMS system operates effectively, it is essential to carry out some form of monitoring activity in addition to ongoing monitoring and measurement. Internal audits provide:

- a means of confirming that the EnMS policy is understood and is being implemented;
- management confidence that the system is being implemented in the manner prescribed;
- management confidence on the energy performance of the system;
- a structured means of identifying deficiencies in the system, agreeing on corrective action, and following up to confirm effectiveness;
- enable system weaknesses to be highlighted before the related potential problems are reflected in the energy performance;
- a convenient framework for investigating operations in a particular area, e.g., in response to significant energy issues;
- a means to demonstrate continual improvement in both energy performance and in the energy management system;
- an opportunity for employees to see areas of the organization they do not normally work in; and,
- an opportunity to share ideas and successes as well as identify potential opportunities.

The Audit Process

The entire audit process can be described as planning, executing, and reporting.

Planning the Audit

With EnMS auditing, as with any type of auditing, a very important step is planning the audit. This involves preparing the specific audit plan, making team assignments, and deciding on working documents. To understand the importance of planning, imagine going on vacation without planning; in other words, not knowing where you are going, what you will do, or how long you will be gone.

The Audit Plan

The audit plan is the document that establishes the scope, objectives and criteria, and agenda of the audit. It also goes into specific details on what areas will be audited, when, and by whom.

These planning items are usually described in the organization's procedure(s) for internal auditing. The audit scope defines what part of the organization will be audited. Obviously, this should coincide with the scope of the EnMS itself, and is usually the site in question. If the full EnMS audit is divided into smaller segments conducted throughout the year, then the scope of any given segment is what portion of the organization will be audited at that time. Typically, an organization will create a chart or matrix showing the various divisions of the site or activity and when it will be audited.

Also noted in the audit plan is the audit objective(s). The audit objective describes why an audit is being conducted. Typically the reason is to evaluate the conformance to ISO 50001 or a part of ISO 50001 or for energy performance.

Energy management system audits should be carried out to:

- determine conformance of an EnMS with the EnMS audit criteria;
- determine whether the EnMS has been properly implemented and maintained;
- identify areas of potential improvement in the EnMS;
- assess the ability of the internal management review process to ensure the continuing suitability and effectiveness of the EnMS;
- evaluate the energy performance of the EnMS of an organization;
- evaluate whether the EnMS continues to meet the needs of the business;
- identify areas of conformity and nonconformity with respect to implementation of the EnMS system, and to ensure that corrective action is implemented; and,
- provide a basis for identifying opportunities and initiating actions to improve the EnMS.

Energy performance audits should be carried out to:

- evaluate the current energy performance of the system;
- evaluate the current baseline(s) and EnPIs;
- evaluate the response and investigation of significant deviations in energy performance;

- evaluate energy performance in energy planning activities such as objectives and targets;
- review resourcing of action plans and method of verification of energy performance improvement;
- determine effectiveness of communication of energy performance;
- determine effectiveness of operation and maintenance controls;
- review considerations in design and procurement processes; and,
- review projected energy performance and actual vs expected energy consumption.

The audit criteria define what the “rules” are – the most basic set an internal audit must evaluate are the "shalls" in ISO 50001. A subtle point to note, however, is that the site’s EnMS requirements are also part of the criteria. This means that in addition to responding to the requirements of ISO 50001, the EnMS must also respond to “planned arrangements”, or what the organization said it was going to do. In audits, a common response is “the standard does not require such and such detail”. However, if the site’s procedure does require some specific response, then it becomes part of the criteria. In essence, the auditors are verifying the system not only conforms to ISO 50001, but also conforms to what the organization’s EnMS documentation states.

How the audit is divided and scheduled throughout the time interval is up to the organization and will be a function of minimizing disruption to site operations and resource needs. Frequency of audits is partially a function of what was found before. If a process or area has an unusually large number of discrepancies (i.e. nonconformities), it needs to be audited more frequently. The audit is also adjusted based on the importance – so if the significant energy uses change, the frequency or number of times a topic is audited would change.

How long each audit takes again is a function of resource needs and operations. It is recommended, that any individual audit event not be protracted out over long time periods. The longer a task takes, the easier it is to get distracted and lose focus. Conformance relates to addressing each of the requirements of the ISO 50001standard (i.e. the “shalls”), along with each requirement of the organization’s EnMS documentation. Consistency relates to how well each process of the EnMS relates to the others. In other words, does the system make the necessary connections? For example, are there operational controls in place for each significant energy use, as well as monitoring and measurement of the significant energy uses, and are those who work in areas with significant uses trained?

Finally, continual Improvement requires that the system lead to improvements in the EnMS itself, as well as to improvements in energy performance. A system that has the prerequisite processes, but remains static, is not in conformance.

Now we know what is being audited, when it is being audited, and to what “rules” it is being audited. The remainder of the plan is simply then the logistics of the audit. The

logistics include the timing of the audit agenda, identification of the audit team members and their assignments, etc.

Typical contents of an internal audit plan include:

- audit objectives (what the audit will evaluate and determine);
- audit scope (what processes and areas are to be audited):
- the audit criteria (what requirements will be audited);
- date and time of the audit;
- identification of the audit team members;
- auditor assignments and timing (who will audit what requirements and when and where);
- reference to relevant EnMS documents that apply to the audit; and

If the internal audit is to proceed smoothly, it is helpful for the audit program manager or the internal auditor to establish a dialogue prior to the actual audit with the persons responsible for the processes and areas being audited. This dialogue could be conducted by memo, telephone, or during a formal or informal meeting and typically includes communication of the audit plan. The main factor that should influence the choice of the method for setting up this dialogue should be the organization's normal style or culture.

Irrespective of the method of communication adopted, the following points should be established:

- overall duration of the proposed audit,
- starting location and time
- scope (processes and areas) to be covered by the audit
- timetable for approximate progress of the audit where applicable (e.g., if a number of different processes or areas are to be included in the scope of the audit),
- arrangements for any close-out meeting where the findings of the audit can be agreed upon and corrective action requirements discussed, and
- personnel most likely to be involved at each stage of the audit.

If the audit program manager or auditor does not give sufficient attention to ensuring that clear agreement is reached with respect to the above points, the potential for misunderstandings that can affect the conduct of the audit is greatly increased. However, these initial communications with the personnel of the area being audited not only affect the "tone" of the forthcoming audit, but they can significantly influence the commitment and level of cooperation shown by that area throughout the audit process and for many subsequent audits.

Prior to commencing the audit, but once the plan is prepared, the working documents that will be used by the audit team are defined. Working documents are those

documents such as observation logs and checklists that are used during the audit to collect evidence, but are not necessarily retained as records. In other words, they may be discarded after the audit is complete and the report prepared.

The format of a checklist may vary considerably, depending on whether it is intended to act as a job aid or as a part of audit records showing the scope and conduct of the audit. The former may consist only of general topics to be covered during the audit, whereas the latter may be an extensive and detailed questionnaire on which details of sampling and answers to the questions are to be recorded.

The need for checklists and the type appropriate will vary according to other experience of the auditors and the culture of the company. Although an auditor should always work within the scope defined for the audit, the working documents must not be designed so that they restrict additional audit activities or investigations that may become necessary as a result of information gained during the audit.

There are differences of opinion over whether it is preferable to create the checklist for each audit or whether a previously developed checklist can be used. Although the former is desirable in principle, it is not always practical in terms of the best use of the resources available. The best compromise is to utilize whatever available checklists are already in existence, but to review these critically against the relevant documents previously identified. In this way, time can be saved in using them as a foundation without detracting from effectiveness.

Audit Team Assignments and Auditor Qualifications

The organization needs to identify auditors in order to carry out EnMS audits effectively. These individuals are usually employees who have other day-to-day functions and responsibilities. They receive specialized training in internal auditing and the organization's EnMS. It is not expected that these individuals are experts on EnMS auditing. The key is that they have the level of expertise necessary to audit the EnMS in their organization.

In general, EnMS auditors, or collectively as a team, should have some degree of knowledge of: management systems, auditing methodologies and techniques, and energy. It is well within the right of the organization to assemble a team of individuals who collectively have this knowledge. More importantly, to an extent, it is not so much the auditor's technical skills, but his or her interpersonal communication and observational skills that can matter the most. The ability to interact with individuals, collect information, and mentally process observations is a skill difficult to teach. The auditor must be capable of communicating clearly both orally and in writing. This requires an ability to be concise and accurate, to be able to modify the approach and questions to be compatible with the person being interviewed, and to be a good listener.

Diplomacy is an essential characteristic of an auditor, which must be balanced by an ability to be assertive if the situation demands it. The auditor must be able to follow

audit trails to their logical conclusion, i.e., analytical abilities combined with perseverance are essential if the audit is to be effective and not superficial. Auditors must be observant and not liable to distractions. They must be able to assess facts without speculation and reach consistent decisions.

Conducting the Audit

Roles and Responsibilities

Conducting the audit—simply, this means collecting the information, or evidence which will be compared to the criteria to assess the degree of conformance to planned arrangements. One important item for every audit is to remember that the goal of an audit is to assess the state of the EnMS in order to encourage participation and improvements, and not to "get" individuals.

The Opening Meeting

Even in circumstances where the auditor and auditee are well known to each other and relationships are normally very informal, it is still advisable to commence the internal audit with an opening meeting that covers certain specific topics. In circumstances where auditee(s) and auditor(s) are not known to each other, e.g., in a large organization, or where audits are conducted on a corporate basis, such a meeting is essential. The auditor should note who is in attendance, since this information may be required for the audit report.

Irrespective of the formality or informality of an opening meeting, there are certain topics that are usually addressed. These include:

- Introductions
- Scope of the audit
  Although the scope and the audit plan (agenda) should have already been agreed upon as part of the audit preliminaries, these should be re-confirmed at the opening meeting. In particular, the suitability of the planned timing during the audit should be discussed in case unforeseen circumstances have resulted in there being problems with the schedule contained in the original audit plan.
- Method of working and reporting
- Closing meeting
  Provisional arrangements for a closing meeting should be agreed with respect to both its timing and who should attend.

Collecting Evidence

Having established the scope of the audit, a review of the relevant documents and records is conducted. The auditor, in undertaking this general review, should also consider how much time is necessary to prepare the required checklists and to perform the audit, and confirm that this is compatible with the actual time available. Lastly, the auditor must satisfy himself that the business systems and/or technology involved in the

area being audited are not so unfamiliar to him that they undermine his ability to conduct the audit. It is a good practice for the auditor to review the internal audit process to ensure understanding of its requirements and to identify any changes to the process since his last involvement in the audit process.

The foundation of a good audit is effective evidence gathering. The ultimate interpretation of the data to develop findings will only be as good as the raw data. The auditing planning process described above was in part intended to identify the criteria and decide what information must be collected to verify conformance. This leads to the conclusion that the auditor must be aware of not only what the requirement is, but what type of information will be appropriate to verify conformance.

The key is that an EnMS audit is not a documentation exercise. Having the appropriate documentation is only part of the story. The organization must also have properly implemented and maintained the processes.

This constant observation is part of the process of developing “auditor awareness”, an essential requirement for effective and thorough audits. The auditor should always be conscious of what is happening around him or her, whether it is during the visit to a particular area or while moving between departments or areas. The auditor should be alert and prepared to note comments or visual clues which will make the subsequent sampling more effective, e.g., use of compressed air hoses to sweep floors indicates a lack of understanding of the energy uses. This awareness is something that every auditor has to develop and some find it easier than others. It is a skill that is developed with experience and maintained through regular usage.

Management of time during the audits is a more significant area of concern; e.g., "How was I supposed to review all these activities in the two hours allocated and what shall I do about the other two departments I should also have visited this morning?”
One method that helps to minimize this problem is for the auditor to allocate the time available between the various activities being undertaken in that department. It is also useful to try and identify what assessment techniques are likely to be most productive and what kind of sampling would be the most appropriate.

Finally, a good way to manage time wisely is to look for a logical route or path to follow. This may be following the flow of information or material through the area or by energy source or by a process of identifying the inputs, the processing stages and the outputs. Having identified the appropriate audit path, the auditor tries to control any deviations from that path so that unnecessary sampling and irrelevant discussions are minimized. For example, the purchasing manager may be very enthusiastic about explaining and demonstrating the intricacies of the organization’s green purchasing program, but can spending an hour reviewing that one topic be justified?

The Use of Checklists

Earlier, when preparation for the audit was discussed, great emphasis was placed upon the preparation of checklists. These checklists should be kept available throughout the audit. Ideally, they should not be followed blindly, but should be used as an aid to check that all the topics relevant to the process or area have been examined. In some instances, it may be beneficial to use spaces incorporated into the checklist to record information gathered during the audit. Frequently, internal audit procedures require that the checklist, completed in this way, be retained to provide objective evidence of effective implementation. This use of checklists, when combined with a well-structured approach, helps ensure all relevant topics are reviewed in the time available and that the audited department is left with the impression of a well-conducted, thorough audit.

Interviewing

Interviewing is essentially the technique of gathering information from another individual by asking a series of questions. This may sound easy, but there are varying styles of questions that will prompt different types of answers. For example, closed-ended questions (i.e., yes/no answers) will not yield details or explanations. It is not feasible to assess how well someone understands a concept by using closed-ended questions. On the other hand, there is a time for closed questions, usually when the auditor wishes to confirm information, verify a point, or when the person being audited is very nervous, or time is short. Keep in mind that the auditor can ask additional clarifying questions to elaborate on a point.

Open ended questions allow for demonstration and explanation of a situation. For example, “What is your role in this objective?” “What if…” questions are another great tool to have in the auditor toolbox. It allows the auditor to evaluate different options that may not be available for observation. For example, “What if a new energy source was introduced in this action plan?”

Keep in mind that silence, allowing the person being audited to have some time to think, is also a valid technique for obtaining information. In general, interviews should be characterized by structured, thoughtful questions, putting the auditee at ease, explaining what is required, listening to the response, and avoiding personal judgment. Other types of questions, such as antagonistic or leading are not recommended.

There are a few basic questions that are typically asked. Some represent requirements that all employees should be able to address, and can be asked of anyone within the EnMS. Others are more specific questions, applicable to individuals involved with critical functions, as defined by ISO 50001. Examples of some basic questions that can be asked across functional areas and levels of personnel include:

- Are you familiar with the energy policy?
    - What does it mean to you in your job?
- How do you communicate energy concerns or ideas?
- What are the significant energy uses associated with your function?
- How do you know what controls are in place for XXX significant energy use?

- What specific training have you received?
- Are there any objectives and targets associated with your function?
- Are you responsible for any monitoring and measurement activities?
- What records do you keep?

The auditor must remind him or herself that an audit is a sampling of the EnMS at a specific point in time. There is no expectation that every document or every person involved in the EnMS will be reviewed. Part of the art of auditing is knowing how to select a representative sampling. Although there is much latitude with sample size, one should definitely not continue auditing until they find a nonconformance. Unless there is an indication of a problem within the pre-agreed upon sample size, the audit is complete when that sampling is done, even if no nonconformities were noted. The nature and size of the sample size is determined during the audit planning. It is a good idea to use an odd number in your samples as this helps to ensure that the results give an advantage one way or the other. It is important to remember this is not a statistical process so sample sizes within a particular requirement are typically 1 to 7 in number.

Closing Meeting

Findings should be reviewed with the auditee during the audit. If the auditor wants time to review the finding then a time to review the information with the auditee prior to the closing meeting should be established. There should not be any surprises at the closing meeting. The audit team should also review all the findings and especially any negative findings (nonconformities) prior to the closing meeting.

At the closing meeting the lead auditor or team leader (or sole auditor) presents any findings. It is important that representatives of the audited processes or areas acknowledge any nonconformities that were found and recorded. The best practice is to have a manager of the function audited to countersign the written nonconformity to acknowledge they understand and agree with the facts represented in the written finding. Even if you are unable to follow this practice, it is important that there is an opportunity to clear up any misunderstandings. A little extra time spent at this stage to ensure that the audit is perceived as a constructive exercise with everyone being thanked for their cooperation will make the success of the internal audit program more likely. If it becomes a hammer that is used to hit people, it will be a less successful internal audit program.

The Audit Report

Once agreement has been reached, both among the audit team and with the auditee, it is time to prepare the audit report. Note that ISO 50001 does not require a documented audit report, but audit results must be recorded and maintained and communicated to top management. It is very difficult to verify that the internal auditing requirements have been satisfied without a supporting record, which is typically a documented audit report that summarizes the results of the audit.

The audit report is usually prepared by the lead auditor; although he or she may have other team members prepare portions. The content of the audit report is determined by the audit plan and the organization's EnMS audit process. Having completed the examination phase and evaluated the collected data observations, the auditor prepares a balanced report that shows the areas that were in conformance as well as the areas there were not in conformance. Only presenting one side of the audit results (i.e., just the nonconformities) is not reflective of the audit conducted, which identifies both conformances and non-conformances.

An audit report could take many forms. For example it could be in the form of a PowerPoint presentation, a completed form or template, or a written report. It typically includes the:

- audit objective(s),
- audit scope,
- audit criteria,
- date of the audit,
- names of the audit team members,
- summary of the audit results (positive and negative), often in a graphical format using pie charts, tables, trend lines, etc.,
- audit conclusions
- distribution list for the audit report

However, irrespective of the style and format, the audit report should cover the key topics already identified as being essential for discussion and presentation at the opening and closing meetings. In constructing the report, two specific objectives must be kept in mind.

(1) The report has to provide objective evidence of effective implementation of the audit process.
(2) The report has to allow for corrective action to be addressed and for follow-up requirements to be established and initiated.

Presenting negative information is difficult for anyone. That is why it is important that the information be clear, contain the details needed to reproduce the situation, and that there is a clear relationship between the criteria being evaluated and the evidence collected. A recommended format for a negative finding is to first document the criteria or requirement that was not met, and then state the evidence that supports the negative finding. It is unlikely that anyone will be upset by positive information; however, negative information is likely to upset those involved, so clearly stated facts are the best approach.

Distribution of the audit report and the nature of the audit documentation are usually decided on and addressed in the organization's audit procedure. An audit is considered successful when useful, constructive feedback has been obtained that enables the organization to make needed corrections and continue to improve the system.